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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,429	12/12/2003	William S. Wong	D/A3602	3875

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EXAMINER	
QUACH, TUAN N	

ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,429	WONG ET AL.	
	Examiner	Art Unit	
	Tuan Quach	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20-26* is/are pending in the application.

4a) Of the above claim(s) *6 and 9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8,10,11,13-17 and 20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Tuan Quach
Primary Examiner

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/17/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

Applicant is further requested to indicate which portion of the publication delineated in [0019] and [0021] regarding the Technology and Applications of Amorphous silicon being relied upon, including the page numbers of the portion being relied upon, to be incorporated by reference in its entirety.

Claims 7, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 7, 8 line 1, "the semiconductor" lacks antecedent basis.

Claims 20 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 depends from claim 19; although claim 19 was cancelled by the amendment, the dependency was overlooked and the claim becomes indefinite as being dependent from a cancelled claim.

Claim 23 recites "a first gate line coupled to a gate electrode of the first thin film transistor" this is in conflict or redundant with "a gate line coupled to a gate electrode fo the first thin film transistor" as now amended in claim 1 line 5; is it another gate line or the same gate line?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 7, 8, 11-17, 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase in view of the admitted prior art. (APA).

Kawase 2003/0141807 teach thin film transistor having increased channel width to increase mobility in organic semiconductor. Kawase teaches, [0001]-[0129], display devices having pixels including organic material and the display elements having associated thin film transistors operating on the pixel of the display wherein the problem of low mobility in organic TFSs was discussed and the solution of increasing the channel width and reducing the channel length is also taught, e.g., [0093]-[0096], wherein such would permit optimization of drain current to permit the use of relatively low mobility organic/polymer transistor. Although Kawase lack the explicit recitation that the channel width being longer than the shorter of either dimension of the associated pixel, nonetheless, such would follow given the magnitude of the channel width employed in Kawase, to be extremely long channel width, [0095], including in excess of 1000 microns thus is not limited to below or shorter than either pixel dimensions and since the pixel dimensions are acknowledged by applicant to be typically range from 85 to 500 microns, e.g., instant specification [0026]. Regarding the amended feature regarding the gate line coupling and first data line, such would have been conventional and obvious, as the corresponding date lines, and drive and sensing circuits for connections to the TFTs, such have been conventional and necessary to complete the necessary connections, e.g., as evidenced in Kawase, [008], Figs. 2, 4 wherein the corresponding connections to the date lines and to the gate lines of the respective transistors are apparent, Fig. 8, [0030], [0039], [0079] and as acknowledged in the instant specification, [0019], Fig. 2, [0014].

Regarding claims 2 and 26, it would have been obvious to have optimized the ratio of channel width to length to obtain the desired mobility in view of the teachings of the prior art above, including [0096], e.g., to maximize the channel width and to minimize the channel length of the organic TFTs and such would have been obvious and apparent when the conventional organic material having the appropriate mobility is employed. Regarding claim 3, the use of pixel squares would have obvious as admitted by applicant, instant specification [0024]. Regarding claim 4 5, 10, the use of one or at least two bends in the channel is shown in Kawase, Fig. 13, including surrounding the drain electrode, [0094]. Regarding claims 7, 8, and 22 the use of organic or polymeric semiconductor material is well known and further taught in Kawase supra, including [0107], and wherein the selection of the numerical value of the mobility would have been obvious given the appropriate corresponding material employed. Regarding claim 11, the use of backlit liquid crystal material is well known as admitted by applicant, [0031]; alternatively, such use of conventional material is notoriously conventional and would not require any inventiveness and would have been obvious. Regarding claims 12-17, the use of gate line, e.g., 108, to couple to the gate electrode, e.g., 104, and channel surrounds the drain electrode, and the source and drain electrode and the channel associated therewith is also shown, Fig. 13. Regarding claims 20-21, and 23-25 employing associated desired number of thin film transistors including to two or three transistors, and thus gate lines, corresponding date lines, and drive and sensing circuits for connections to the TFTs, such have been obvious to complete the necessary connections, e.g., as evidenced in Kawase, [008], Figs. 2, 4 wherein the corresponding

connections to the date lines and to the gate lines of the respective transistors are apparent, Fig. 8, [0030], [0039], [0079] and as acknowledged in the instant specification, [0019], Fig. 2, [0014].

Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase taken with APA as applied to claims 1-3, 7, 8, 11-17, 20-26 above, and further in view of Yamazaki et al.

In addition to the reasons delineated above, Yamazaki et al. 2002/00272229 further evidences the additional desired numbers of gate line, e.g., first gate line, second gate line, and third gate lines, Fig. 11B, [0118]. It would have been further obvious to recite the desired number of gate lines including three gate lines as further evidenced by Yamazaki et al. The completion of connections for drive circuits and sensing circuits would have been conventional and obvious as delineated above.

Applicant's arguments filed July 6, 2006 have been fully considered but they are not persuasive.

Initially, note the various partial or complete failures of the applicant to response to the Office action as delineated above.

Applicant argues that Kawase does not the date line coupling and first data line coupling to a source electrode. Note however, the instant invention, as admitted in the Summary, pages 1-2, corresponding to the thin film transsitor having channel width exceeding the shorter of the width or length of the pixel, and in that aspect, is fully taught by the prior art above. Regarding the couplings to the data lines, such nonetheless would have been conventional and obvious, in view of Kawase as

delineated above, [008], Figs. 2, 4, wherein the corresponding connections to the date lines and to the gate lines of the respective transistors are apparent, Fig. 8, [0030], [0039], [0079], and additionally, the admitted prior art as acknowledged in the instant specification Fig. 2, wherein such couplings would have been apparent or obvious.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tuan Quach whose telephone number is 571-272-1717. The examiner can normally be reached on M-F from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Nathan Flynn, can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Quach
Primary Examiner